

GOLD

ULTIMATE VERSATILITY OD/ID GRINDER



QUALITY.
Over and over again.

YOU'VE STRUCK GOLD

The Weldon GOLD CNC cylindrical grinders are designed to satisfy a wide variety of medium-low production applications either between centers or in a chucking mode. Rotary and linear axes are sealed from airborne contaminants providing unmatched longevity in carbide and ceramic grinding applications.

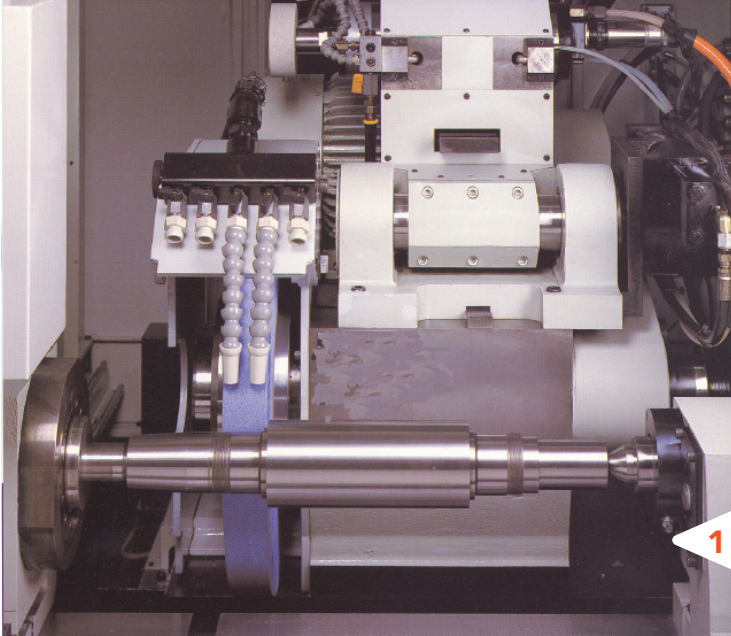
When furnished with the optional swing-down ID grinding fixture, the GOLD machines can grind outside diameters, internal diameters, shoulders, and faces in a single set-up. The CNC control can address complex form grinding (tapers, radii, etc.) via form dressed wheels or profiling. Properly equipped, a GOLD is ideally suited for high speed "Peel" grinding with CBN abrasives. Additionally, a programmable "C" axis package can be provided to accommodate eccentric and non-round grinding applications (OD and ID).

STANDARD FEATURES

- **FANUC model 32i-BT CNC control with color LCD**, and servo drives featuring FANUC AC digital technology. Includes a battery backup absolute feedback system eliminating the need to reference at each start-up.
- **Shear Damper machine base** providing stiffness, vibration control, and thermal stability through the use of steel shear tubes covered with a viscous material and encapsulated with a special replicating resin.
- **Cross-roller linear way system** with recirculating bearings and precision ground rails. Includes integral way bearing seals and an external wiper system.
- **Low inertia break-away coupling**, X-axis, for ballscrew protection.
- **Heavy-duty live spindle workhead** with 6" A2 spindle nose and #5 MT center. Features a 4.7" spindle diameter and a quad set of angular contact bearings.
- **Preloaded, precision ground, double-nutted ballscrew assembly** for X and Z axes.
- **Automatic lubrication system**, monitored by the control, with lube fault protection.
- **Tailstock, lever operated, spring loaded, with #5 MT center**. Includes manual taper adjustments with eccentric quill design.
- **Variable speed wheel drive, CNC controlled with dynamic braking**. Normally arranged for constant surface speed as the grinding wheel size is reduced.
- **Full enclosure with manually operated front and side sliding door assemblies** and both side and rear maintenance access panels.

OPTIONAL FEATURES

- **24" swing capacity** to accommodate larger work parts.
- **In-process gage** for automatic size control.
- **Automatic lateral locator**, wheelhead mounted, featuring a Renishaw probe.
- **Acoustic emissions sensor** for gap elimination, crash detection, and touch dressing.
- **Programmable workhead** with rotary scale ("C" axis), for non-round applications.
- **Power operated tailstock** 5" stroke with smart cylinder for positional feedback.
- **Electric rotary dressing systems** for superabrasive wheels or extended diamond life when processing with standard abrasives.
- **Work holding solutions can be addressed** with a variety of systems such as manual and powered jaw chucks, collet chucks, magnetic faceplates, vacuum chucks, expanding arbors, pitch-line chucks, and custom fixtures.
- **Coolant supply and filtration systems are available** to suit any application; magnetic, fabric, cyclonic, pressure, and combination filtration units can be provided.
- **FANUC X-axis linear motor** for non-round and high-precision contouring applications.
- **ID grinding fixture**, (swing-down) hydraulically operated.
- **GMN high frequency grinding spindles** with threaded or HSK quill arrangements.
- **Spindles sized** to suit the application.
- **Automation** via FANUC 6 Axis robots, gantry systems or custom alternatives can be factory integrated on a turnkey basis.

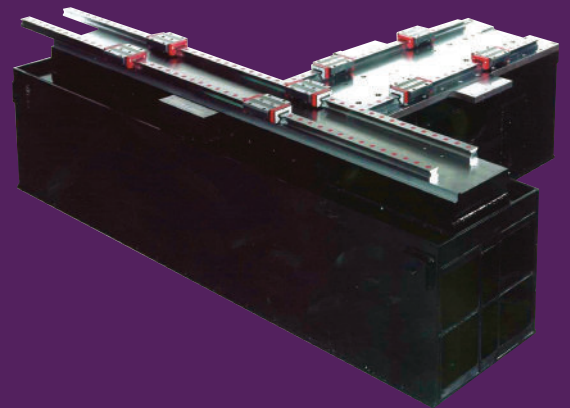


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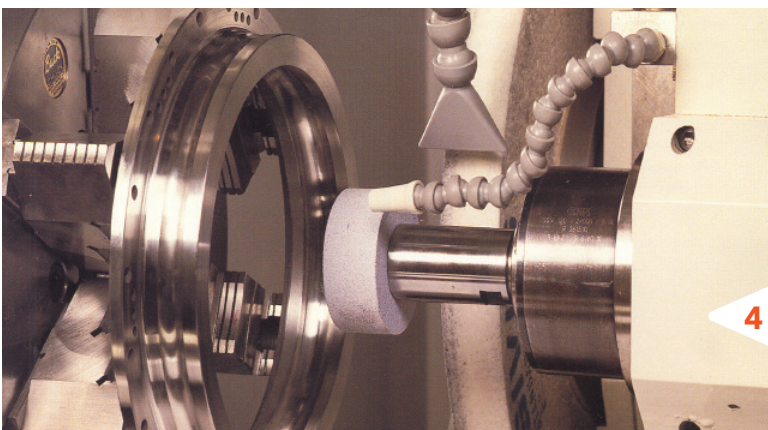


QUALITY. OVER AND OVER AGAIN.

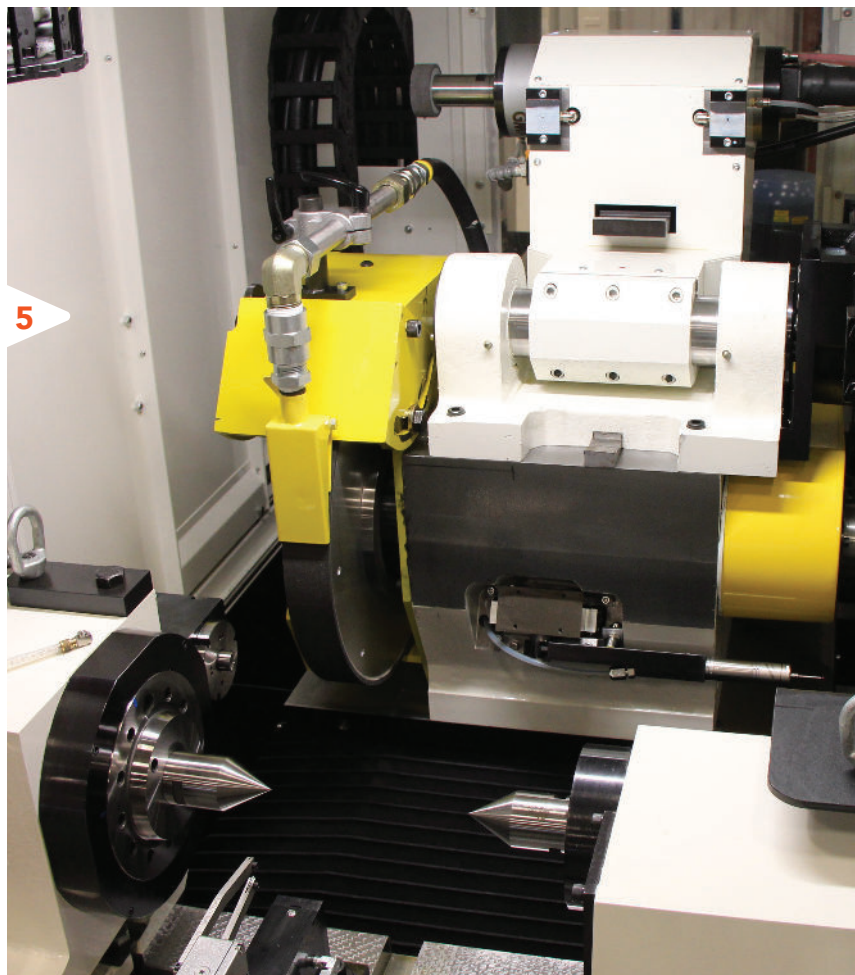
- 1 **32" Z-axis stroke** for multiple diameter grinding on parts up to 26" in over-all length.
- 2 **Weldon is known for its problem solving capability.** Whether your grinding application is basic or difficult, our team of Application Engineers will work to develop a solution that will satisfy your needs.
- 3 **Shear Damper** machine base.
- 4 **Live spindle Workhead** allows for chucking parts to perform OD and ID grinding in a single set-up.
- 5 **Vitrified CBN abrasives** can be used on both OD and ID spindles.
- 6 **Renishaw probe** can be used for precise lateral positioning or probing radial surfaces.



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WELDON GOLD SPECIFICATIONS

CAPACITY

Maximum work swing	16"
Maximum distance between centers (1612)	12"
Maximum distance between centers (1632)	26"
Worktable travel (1612)	26"
Worktable travel (1632)	32"
Maximum work piece weight, between centers ..	300 lbs.

WORKHEAD

Bearings	Precision angular contact
Spindle nose (ASME standard)	6" A2
Center taper	#5 Morse
Through-hole diameter	1.0625"
Speed (Infinitely Variable)	0-900 RPM
Maximum run out.....	0.000050"
Motor, FANUC AC servo drive	5 HP

WHEELHEAD

Motor	15 hp, T.E.F.C.
Wheel speed variable RPM.....	8.500 SFPM (nominal)
Travel of wheel slide	15.25"
Bearings	Ball, angular contact

Note: Angular contact ball bearings allow lateral loading while contouring with wheel edge

GRINDING WHEEL

Maximum OD Wheel diameter.....	16"
Maximum wheel width.....	3.0"
Worn Wheel Size.....	10"

TAILSTOCK

Center Taper	#5 Morse
Quill retraction (manual lever)	1.38"

TABLE DRIVES

FANUC AC digital servo drives	1.9 HP
Command resolution, least programmable increment	0.000010"
Position feedback resolution	0.0000010"
Way construction	Hardened and ground cross rails
Bearings, preload.....	Cross-roller

ELECTRICAL SPECIFICATIONS

Complete electrical equipment wired in accordance with IEC electrical standards for metalworking machine tools	
Standard voltage	480 VAC, 3-phase, 60 Hertz

Note: Any other voltage must be referred to factory for price and delivery.

LUBRICATION

Wheel spindle	Permanent grease-packed
Workhead spindle.....	Permanent grease-packed
Ballscrews.....	Automatic lube oil
Ways.....	Automatic lube oil
Safety detect interlock to prevent cycling if low air pressure or low oil level is sensed	
Automatic programmed cycle to lubricate machine when started up	

PNEUMATICS (air moisture: 70° F. dew point maximum)

Air pressure.....	80 PSI
Air volume.....	5 SCFM

Note: System requires a filtered and dry air source

COOLANT SYSTEM

Machine is set up to pump coolant out to an optional coolant filter or tank system. All necessary piping and solenoids for coolant control from the machine control are provided.

MACHINE DIMENSIONS AND CONSTRUCTION

Width (1612)	103"
Width (1632)	131"
Depth	127"
Depth for shipping, pendulum swung in.....	93"
Height	85"
Centerline work piece, height from floor	42"
Weight.....	15,500 lbs.
Construction	Welded steel shear Damper™
Foundation.....	6" concrete floor is recommended
Three-point anti-vibration suspension system requiring no floor attachment	

CNC CONTROL SPECIFICATIONS - FANUC 321-BT

- Manual pulse generator
- Full linear and circular contouring and positioning capabilities
- FANUC AC digital servo system
- Direct rpm programming or constant surface speed
- Built-in diagnostics
- 10.4" high-resolution color LCD
- Macro Subroutines
- Automatic recognition of EIA or ISO coding
- Absolute / incremental programming software over travel checking
- RS 232 / Ethernet / USB / Memory Card Interface